IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NORTH CAROLINA
CHARLOTTE DIVISION

BRUCE RHYNE and JANICE RHYNE, Plaintiffs, v. UNITED STATES STEEL CORPORATION, et al., Defendants.	)	Case No.: 3:18-cv-00197-RJC-DSC

DEFENDANT UNITED STATES STEEL CORPORATION'S MEMORANDUM IN SUPPORT OF ITS MOTION TO EXCLUDE OR LIMIT THE TESTIMONY, OPINIONS AND REPORTS OF PLAINTIFFS' EXPERT ROBERT HARRISON, M.D.

Defendant United States Steel Corporation ("U.S. Steel") respectfully requests that the Court grant its Motion to Exclude or Limit the Testimony, Opinions and Reports of Plaintiffs' Expert Robert Harrison, M.D. Specifically, U.S. Steel seeks an Order precluding Dr. Harrison from offering any specific causation opinions at trial because his specific causation opinions, reports and testimony are based in part on the inadmissible testimony and opinions of Plaintiffs' exposure experts and because his opinions, reports and testimony do not meet the necessary reliability and relevance requirements of Rule 702 of the Federal Rules of Evidence and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) and are therefore inadmissible.

I. STATEMENT OF THE CASE

Plaintiffs Bruce and Janice Rhyne bring claims related to Mr. Rhyne's allegations that he contracted Acute Myeloid Leukemia ("AML") from his use of products or solvents that contain benzene. Remaining for trial, currently scheduled to commence July 6, 2020, are Plaintiffs' claims against U.S. Steel and co-defendants Safety-Kleen and The Savogran Company, ("Defendants")

for negligence, gross negligence, punitive damages, loos of consortium, and fraudulent concealment and/or breach of implied warranty.

One of Plaintiffs' medical causation experts, Dr. Harrison, opined in this matter that Mr. Rhyne's AML was caused by his use and exposure to the benzene contained in Defendants' products or solvents. However, for two reasons, Dr. Harrison failed to follow a proper methodology to reach that conclusion. First, Dr. Harrison failed to perform a proper differential diagnosis to "rule out" several known risk factors for AML that are relevant to Mr. Rhyne's diagnosis. Secondly, Dr. Harrison's causation opinion is not based on admissible evidence that Mr. Rhyne experienced a level of benzene exposure necessary to cause his AML. Therefore, Dr. Harrison cannot properly "rule in" benzene as a cause of Mr. Rhyne's AML. These defects individually and together render Dr. Harrison's specific causation opinion unreliable and, therefore, inadmissible.

U.S. Steel files this motion in limine to exclude or limit the testimony, opinions and reports of Dr. Harrison because his specific causation opinions are misleading, unreliable and inaccurate.

II. LEGAL STANDARD

A. Admissibility of Expert Testimony

The proponent of expert testimony must establish its admissibility by a preponderance of proof. *Cooper v. Smith & Nephew, Inc.,* 259 F.3d 194, 199 (4th Cir. 2001). In other words, Plaintiffs have the "burden of proving" that Dr. Harrison's expert methodology and testimony are admissible pursuant to Rule 702, *Daubert* and its progeny. *See, e.g., Cooper v. Smith & Nephew, Inc.*, 259 F.3d 194, 199 (4th Cir. 2001) (explaining in context of *Daubert* challenge that "[t]he proponent of the testimony must establish its admissibility by a pre-ponderance of proof").

Rule 702 provides that expert testimony is appropriate when it "will assist the trier of fact to understand the evidence or to determine a fact in issue." Fed. R. Evid. 702(a). Rule 702 further

provides that a witness qualified as an expert may be permitted to testify where "(b) the testimony is based upon sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case." *Id.* Courts have distilled the requirements of Rule 702 into two crucial inquiries: 1) whether the proposed expert's testimony is relevant; and 2) whether it is reliable. *Kumho Tire Co., Ltd. v. Carmichael,* 526 U.S. 137, 141 (1999); *see Daubert v. Merrell Dow Pharms., Inc.,* 509 U.S. 579, 589 (1993); *United States v. Forrest,* 429 F.3d 73, 80 (4th Cir. 2005).

The test of "relevance," also described as "fit," considers "whether expert testimony proffered in the case is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute." *Daubert,* 509 U.S. at 591. "'Fit' is not always obvious, and scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes." *Id.* For example, a scientific study must have "a valid scientific connection to the pertinent inquiry as a precondition to admissibility." *Id.* at 591-92.

"The test of reliability is 'flexible,' and *Daubert's* list of specific factors neither necessarily nor exclusively applies to all experts or in every case." *Kumho Tire,* 526 U.S. at 141. But courts must ensure that the expert's testimony is reliable, grounded in "good science," and constitutes more than "unsupported speculation" by considering, *inter alia,* (1) whether a theory can or has been tested; (2) whether it has been subjected to peer review and publication; (3) the potential rate of error, including considerations of litigation motivation and the independence of the investigator; (4) existence and maintenance of standards and controls over implementation; and (5) whether the theory enjoys general acceptance within the scientific community. *Daubert,* 509 U.S. at 590, 592-94; *United States v. Crisp,* 324 F.3d 261, 266 (4th Cir. 2003); *see generally Bryte ex rel. Bryte v. Am. Household, Inc.*, 429 F.3d 469, 477 (4th Cir. 2005) ("*Daubert* aims to prevent expert

speculation…."). In addition to these non-exhaustive and non-dispositive *Daubert* factors, courts may consider "whatever factors bearing on validity that the court finds useful." *United States v. Hammond,* 381 F.3d 316, 337 (4th Cir. 2004); *see also Kumho Tire,* 526 U.S. at 150.

The Rules Advisory Committee outlined five additional factors courts may consider: (1) whether the expert's opinion was developed expressly for purposes of testifying; (2) whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion; (3) whether the expert has adequately accounted for obvious alternative explanations; (4) whether the expert is being as careful as he would be in his regular professional work outside his paid litigation consulting; (5) whether the field of expertise claimed by the expert is known to reach reliable results for the type of opinion the expert would give. Fed. R. Evid. 702 advisory committee note.

The touchstone of the Court's review is reliability—district courts must "make certain that an expert ... employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho Tire,* 526 U.S. at 141. In reviewing the proffered testimony, the Court must assess each step in the expert's analysis:

> [a]ny step [in methodology or reasoning] that renders the analysis unreliable ... renders the expert's testimony inadmissible. This is true whether the step completely changes a reliable methodology or merely misapplies that methodology.

In re Paoli Yard PCB Litigation, 35 F.3d 717, 745 (3d Cir. 1994).

B. Admissible Expert Testimony is Necessary to Establish Specific Causation

A plaintiff cannot establish specific causation merely by showing the onset of Mr. Rhyne's symptoms and the presence of some unspecified exposure to a chemical and dose level, nor may he rest upon qualitative statements that his exposure was "significant." Instead, to establish that an injury was "caused by exposure to a specified substance," a plaintiff must demonstrate "the levels of exposure that are hazardous to human beings generally," and "the plaintiff's *actual* level of

exposure." *Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 263 (4th Cir. 1999) (emphasis added) (quotations omitted). Further, there must be a showing that the plaintiff's level of exposure is comparable to the levels of exposure that are known to be hazardous as a general matter. Indeed, "scientific knowledge of the harmful level of exposure to a chemical, plus knowledge that the plaintiff was exposed to *such quantities,* are minimal facts necessary to sustain the plaintiff's burden in a toxic tort case."[1] *Id*. (emphasis added) (quoting *Allen v. Pa. Eng'g Corp.,* 102 F.3d 194, 199 (5th Cir. 1996)); *see also Zellars v. NexTech N.E., LLC,* 895 F.Supp.2d 734, 742 (E.D. Va. 2012) ("'Ruling in' exposure to a particular substance as a possible cause of a patient's medical condition requires (1) a reliable determination of the level of exposure necessary to cause the condition and (2) a reliable determination that the patient was exposed to the substance at this level."). The Fourth Circuit has equally applied these principles to consider whether expert testimony on causation is reliable. *See Newman v. Motorola, Inc.,* 78 F. App'x 292, 294 (4th Cir. 2003) (affirming exclusion of expert because failure to establish a dose-response relationship); *Westberry,* 178 F.3d at 263; *Zellars,* 533 F. App'x at 198 (affirming exclusion of expert for failure to demonstrate plaintiff's actual level of exposure). Such standard is consistent with a "central tenet" in toxicology—"the dose makes the poison," i.e. "all chemical agents are intrinsically hazardous, whether they cause harm is only a question of dose." Bernard D. Goldstein and Mary Sue Henifin, "Reference Guide on Toxicology," in *Federal Reference Manual on Scientific Evidence,* 636 (3d ed. 2011).

[1] The Fourth Circuit's decision in *Westberry* is consistent with the rule observed among several circuit courts that the plaintiff in a toxic tort case bears the burden of demonstrating her "actual level of exposure" to the alleged toxin. *Westberry,* 178 F.3d at 263. *See also, e.g., McClain v. Metabolife Int'l, Inc.,* 401 F.3d 1233, 1242 (11th Cir. 2005) (requiring proof that the patient was "exposed to a sufficient amount of the substance in question to elicit the health effect in question" and "not simply proof of exposure to the substance"); *Mitchell v. Gencorp Inc.,* 165 F.3d 778, 781 (10th Cir. 1999); *Wright v. Willamette Indus., Inc.,* 91 F.3d 1105, 1106 (8th Cir. 1996); *Allen v. Pa. Eng'g Corp.*,102 F.3d 194, 199 (5th Cir.1996).

Although the caselaw does provide a plaintiff with some flexibility in establishing the "levels of exposure that are hazardous to human beings generally" and drawing comparisons with the levels of exposure experienced by the plaintiff, that flexibility does not relieve a plaintiff of the burden to establish these levels and comparisons through application of methodologies meeting the standards for reliable testimony. *Zellars* at 198 ("While it is true, as Ms. Zellars argues, that precise information regarding a plaintiff's level of exposure is not always available, or necessary, it is also true that a plaintiff must demonstrate the levels of exposure that are hazardous to human beings generally as well as the plaintiff's actual level of exposure.") (internal quotation marks and citation omitted).

In addition to proving that the actual levels of exposure to a chemical were present at doses known to cause the particular type of harm, to prove a toxicological cause and effect, one must also prove there are no alternative causes of the harm. *See Fitzgerald v. Smith & Nephew, Inc.,* 11 F. App'x 335, 340-41 (4th Cir. 2001) (affirming exclusion of expert because of failure to perform scientifically valid differential diagnosis). Therefore, a fundamental step in the generally accepted methodology for determining whether a chemical has caused a certain effect is "ruling out" alternative causes of the alleged disease or illness by conducting a "differential diagnosis."

"[D]ifferential diagnosis is a standard scientific technique of identifying the cause of a medical problem ... by determining the possible causes for the patient's symptoms and then eliminating each of these potential causes until reaching one that cannot be ruled out or determining which of those that cannot be excluded is the most likely." *Cooper,* 259 F.3d at 200 (quotation marks omitted, alteration in original). The significance of the differential diagnosis to the issue of specific causation was illustrated by the court in *Cavallo:*

> The process of differential diagnosis is undoubtedly important to the question of "specific causation." If other possible causes of an injury cannot

> be ruled out, or at least the probability of their contribution to causation minimized, then the "more likely than not" threshold for proving causation may not be met. But, it is also important to recognize that a fundamental assumption underlying this method is that the final, suspected "cause" remaining after this process of elimination must *actually* be *capable* of causing the injury. That is, the expert must "rule in" the suspected cause as well as "rule out" other possible causes.

Cavallo v. Star Enter., 892 F. Supp. 756, 771 (E.D. Va. 1995), *aff'd in part, rev'd in part*, 100 F.3d 1150 (4th Cir. 1996).

Only if the expert can demonstrate ***both*** dose-response and a reliable differential diagnosis can he reliably opine that a particular chemical caused a particular injury. In other words, as explained below, here, Dr. Harrison cannot reliably include the potential that benzene "might or could have" caused the claimed harm without a proper application of the generally accepted toxicological cause-and-effect methodology-with its focus on (1) exposure, dose, and dose-response and (2) a reliable differential diagnosis.

III. PLAINTIFFS CANNOT SATISFY THEIR BURDEN OF ESTABLISHING THAT DR. HARRISON'S METHODOLOGY AND OPINIONS ARE RELIABLE

Dr. Harrison concluded that Mr. Rhyne's AML was caused by his alleged exposures to benzene. More narrowly, Dr. Harrison opined that Mr. Rhyne's alleged exposures to the products manufactured, sold or supplied by Defendants were significant contributing factors in causing Mr. Rhyne's AML. *See* Harrison Report, at p. 13.[2] Dr. Harrison's opinions are based on a flawed "methodology" and unsupported statements and, therefore, are unreliable. Accordingly, his testimony should be stricken.

A. Dr. Harrison failed to apply a proper methodology to "rule out" that Mr. Rhyne's AML was caused by a factor other than exposure to benzene.

As discussed above, in chemical-exposure cases, the plaintiff must show that the alleged

[2] This and the other references to Dr. Harrison's original expert report are attached as Exhibit A-1. All exhibits referenced in this memorandum are attached to Defendant's motion.

injury was not caused by some other possible or obvious factor. *Fitzgerald*, 11 F. App'x at 340-41 (affirming the district court's exclusion of plaintiff's causation expert for failing to perform proper differential diagnosis); *Daubert,* 43 F.3d at 1319; *In re Paoli R.R. Yard PCB Litig.,* 35 F.3d at 763-64 (concluding a reliable differential diagnosis requires consideration of alternative causes). Therefore, even if Dr. Harrison were able to "rule in" Mr. Rhyne's benzene exposure, which as demonstrated below he cannot, Dr. Harrison has failed to perform a valid differential diagnosis to "rule out" other possible causes.

As an initial matter, Dr. Harrison did not review all of the medical records pertaining to Mr. Rhyne that are available in this matter. *See* Harrison Depo. Transcript, at pp. 8:17-9:23; 19:24-20:11.[3] Therefore, Dr. Harrison did not consider Mr. Rhyne's complete medical history and, as a result, his opinions in this matter are limited. Regardless, it is undisputed that Mr. Rhyne's sex (male) and age at the time of diagnosis (around 60) are typical of the 10,000 to 20,000 persons diagnosed with AML each year. *See* Harrison Report (Exhibit A-1), at p. 12, ¶ 7 and Harrison Depo. Transcript (Exhibit B), at p. 148:9-13. Given that most patients present like Mr. Rhyne at the time of diagnosis, it is impossible for Dr. Harrison to rule-out the most common type of AML, which is one of unknown etiology or *de novo*. Nonetheless, Dr. Harrison ruled out that Mr. Rhyne's AML was *de novo* solely because Mr. Rhyne worked at Duke Power for nearly 30 years. Indeed, Dr. Harrison testified that every worker similarly situated to Mr. Rhyne at Duke Power is at an increased risk of developing AML. *See* Harrison Depo. Transcript (Exhibit B), at p. 40:1-22. Dr. Harrison has no scientific or factual support for such a statement. Moreover, Dr. Harrison conspicuously ignored Mr. Rhyne's other risk factors for contracting AML. Therefore, Dr. Harrison's method seems to have started from the premise that Mr. Rhyne's exposure to benzene

[3] This and the other references to Dr. Harrison's deposition transcript are attached as Exhibit B.

caused his AML and his careless differential diagnosis confirms this.

Dr. Harrison agreed in his report that other risk factors of the development of AML include radiation, obesity and familial cancer. *See* Harris Report, at p. 12, ¶ 7. In this case, it is undisputed that Mr. Rhyne (1) worked for nearly 30 years in a nuclear power plant where he incurred radiation exposure;[4] (2) was obese at all times relevant to his AML diagnosis;[5] and (3) had a sister who was also diagnosed with AML.[6] Although Dr. Harrison states in his report that he has ruled out any other known causes of AML, Dr. Harrison's testimony reveals that he did not perform a reliable differential analysis.

1. Dr. Harrison did not reliably rule out Mr. Rhyne's radiation exposure.

Dr. Harrison ruled out Mr. Rhyne's radiation exposure from his nearly 30 years of working in a nuclear power plant as a potential cause of Mr. Rhyne's AML. Dr. Harrison testified that he ruled radiation exposure out based solely on the representations of Plaintiffs' counsel that Mr. Rhyne's cumulative radiation measurement was less than .5 REM[7] over his lifetime. *See* Harrison Depo. Transcript (Exhibit B), at pp. 33:19-34:21. Indeed, Dr. Harrison had not seen Mr. Rhyne's dosimetry measurements or any other evidence of Mr. Rhyne's dose radiation exposure.[8] *See id*.

---

[4] *See* Doc. 1, Plaintiff's Complaint, at ¶ 19(d), attached as Exhibit C.

[5] *See* Mr. Rhyne's May 2015 certified medical records, FWK2B.Rhyne0011-0016; FWK2B.Rhyne0145; FWK2B.Rhyne0039-0047, collectively attached as Exhibit D.

[6] *See* Bruce Rhyne's Depo. Transcript, at p. 39:8-10, attached as Exhibit E.

[7] The roentgen equivalent man ("REM") is a dose unit that measures the health effect of low levels of ionizing radiation on the human body.

[8] Mr. Herrick did include a paragraph about Mr. Rhyne's potential radiation exposure in his report. However, it is clear from Dr. Harrison's testimony that he did not rely on Mr. Herrick's radiation exposure assessment for Mr. Rhyne. Regardless, Dr. Harrison has no reason to "rule out" radiation here. He admitted that AML is a compensable condition linked to ionizing radiation under the Department of Energy's worker's compensation program but did not know the level of cumulative ionizing radiation was considered compensable under that program. *See* Harrison Depo. Transcript (Exhibit B), at pp. 41:22-42:13. Further, at his deposition, Mr. Herrick was unable to identify a level at which he would begin to consider radiation as a factor in causing someone's AML. *See id*. at pp. 43:24-44:13. Lastly, Dr. Harrison has opined in this case that there is no known safe level of exposure to a carcinogen, to include ionizing radiation. *See id*., at pp. 194:15-195:1.

at pp. 34:22-35:9.

2. Dr. Harrison did not reliably rule out Mr. Rhyne's familial cancer.

Likewise, Dr. Harrison did not properly rule out familial cancer as a potential cause of Mr. Rhyne's AML. Dr. Harrison is not an oncologist or hematologist. *See* Harrison Depo. Transcript (Exhibit B), at p. 149:4-7. Still, Dr. Harrison agrees and understands that AML can have a genetic or familial cause. *See id.* at p. 24:2-24.

Dr. Harrison is aware that Mr. Rhyne's sister was diagnosed with AML. *See id.* at p. 35:11-14. Having a sibling with AML is a risk factor for developing AML. *See* Gore Depo. Transcript, at p. 34:25-35:22; 133:16-20.[9] In other words, having a sibling with AML should raise suspicion of a familial cause of one's cancer. Testing is available to determine whether or not an AML patient has familial genes putting them at an increased risk of developing AML. *See* Harrison Depo. Transcript (Exhibit B), at p. 36:7-16; Gore Depo. Transcript (Exhibit F), at pp. 34:25-35:22. Although Dr. Harrison testified that such testing is not routine and done only "when the doctor suspects that there would be a familial history", Steven Gore, M.D., who treats patients with AML as part of his hematology practice and is Plaintiff's other causation expert, testified in this matter that he routinely recommends his patients to be screened to determine whether there is a germline mutation, which would indicate a familial link. *See* Harrison Depo. Transcript (Exhibit B), at p. 36:7-23; *Cf.* Gore Depo. Transcript (Exhibit F), at pp. p. 35:5-8; 38:12-39:10. Either way, Mr. Rhyne's treating physicians did not conduct this type of screening at the time of Mr. Rhyne's diagnosis. *See* Harrison Depo. Transcript (Exhibit B), at p. 36:7-25. More importantly, although the screen could have been performed on Mr. Rhyne even after his initial diagnosis, no one did so. *See* Gore Depo. Transcript (Exhibit F), at p. 41:20-25. Further, Dr. Harrison did not review the

[9] This and the other references to Dr. Gore's deposition transcript are attached as Exhibit F.

medical records relating to Mr. Rhyne's sister's AML diagnosis to determine whether she had been screened. *See* Harrison Depo. Transcript (Exhibit B), at p. 36:7-23.

Although Mr. Rhyne's sister too had AML, Dr. Harrison has concluded that Mr. Rhyne's AML was not familial. When asked about the basis for his decision to "rule out" a familial cause, Dr. Harrison testified as follows:

> Q. …Is it fair to say your view is that in order to arrive at an opinion that a brother and a sister both having AML, that it's familial AML, you would need to see genetic testing for both of them confirming the presence of one or more of these genetic defects that you've identified, is that fair?
>
> A Correct.
>
> Q Okay. Because you didn't see that in this case, you could not arrive at any conclusion to a reasonable degree of medical probability that Mr. Rhyne's AML is familial AML, is that fair to say?
>
> A That's correct.

Harrison Depo. Transcript (Exhibit B), at p. 39:5-39:17.

In other words, although he admits that some AMLs are familial, Dr. Harrison's testimony is that he cannot "rule in or rule out" a familial cause for Mr. Rhyne without conclusive positive evidence of a genetic marker existing in Mr. Rhyne or his sister to suggest such a cause. Dr. Harrison undertook no investigation as to whether a genetic marker was identified in Mr. Rhyne's sister[10] and he brushes aside the fact that testing could have, but was not, performed on Mr. Rhyne. Therefore, Dr. Harrison is approaching his differential diagnosis from the standpoint of ignorance is bliss. However, conclusions drawn from a "differential diagnosis" are not admissible unless the

[10] In fact, Dr. Harrison took no steps to understand much of anything about Mr. Rhyne's sister, including her occupational history or whether she had any known exposures to benzene or radiation. *See* Harrison Depo. Transcript (Exhibit B), at p. 43:2-9. Moreover, Dr. Harrison believes Mr. Rhyne's sister was diagnosed with AML in her 30s, which is an age band Dr. Harrison testified signals familial AML. *See id*., at pp. 35:11-21; 37:1-6; 117:5-8. Accordingly, Dr. Harrison had no basis whatsoever to rule out a familial cause as to Mr. Rhyne's sister's AML.

diagnosis is "conducted with 'intellectual vigor [sic].'" *Fitzgerald*, 11 F. App'x at 340 (alterations in original) (describing district court opinion and quoting *Kumho Tire,* 526 U.S. at 152). The underlying integrity of a differential diagnosis "requires professional thoroughness, and it must at least 'take serious account of other potential causes.'" *Id.* (*quoting Westberry,* 178 F.3d at 265). Regardless, it is notable that Dr. Harrison does not require such positive evidence to "rule in" benzene as a cause of Mr. Rhyne's AML.

3. Dr. Harrison does not reliably rule out Mr. Rhyne's obesity.

In his report, Dr. Harrison states that "[o]besity (but not overweight) has also been suggested as a risk factor for AML." *See* Harrison Report (Exhibit A-1), at p. 12, ¶ 7. Dr. Harrison considers a person obese if his or her BMI is over 30. *See* Harrison Depo. Transcript (Exhibit B), at pp. 32:19-33:18. Dr. Harrison admitted that he would have to take obesity into account if Mr. Rhyne's BMI was above 30. *See id*. at p.33:10-18. However, Dr. Harrison denies that obesity was a potential cause of Mr. Rhyne's AML because he did not see any evidence Mr. Rhyne was obese. *See* Harrison Report (Exhibit A-1), at p. 12, ¶ 7.

Dr. Harris either had incomplete medical records or chose to disregard information contained in them that suggested Mr. Rhyne was obese at all times relevant to his AML diagnosis. Mr. Rhyne's BMI was above 30 and in the range that is medically considered obese. *See* Gore Depo. Transcript (Exhibit F), at pp. 60:14-61:1. Accordingly obesity must be considered in any reliable differential diagnosis of Mr. Rhyne's AML. Here, Dr. Harrison completely disregarded Mr. Rhyne's obesity, which renders his differential diagnosis wholly unreliable.

In summary, Dr. Harrison has not reliably "ruled out" other known factors. In fact, Dr. Harrison's methodology is flawed in that he made no real attempt to adequately investigate any of the other potential causes of Mr. Rhyne's AML. Dr. Harrison's failure to perform a reliable

differential diagnosis to rule out other potential causes of Mr. Rhyne's AML renders his opinions unreliable and inadmissible. *See Hall v. ConocoPhillips*, 248 F. Supp. 3d 1177, 1190-91 (W.D. Okla. 2017), *aff'd sub nom. Hall v. Conoco Inc.*, 886 F.3d 1308 (10th Cir. 2018) (affirming exclusion of Dr. Steven Gore's specific causation opinion because he agreed smoking is a risk factor of AML but made no attempt to adequately investigate the plaintiff's smoking history). Moreover, as explained below, Dr. Harrison cannot possibly identify and separate benzene as the one "most probable" among all other possible causes of Mr. Rhyne's AML, including an unknown cause, particularly without proper dosage data.

B. Dr. Harrison failed to apply a proper methodology to "rule in" that Mr. Rhyne's AML was caused by exposure to benzene.

As a threshold matter, U.S. Steel has filed a separate motion in limine to strike the reports and testimony of Plaintiffs' first industrial hygiene expert, Stephen Petty, and a separate motion to exclude or limit the testimony, opinions and reports of Plaintiffs' second industrial hygiene expert, Robert Herrick. Mr. Petty and Mr. Herrick both performed dose calculations for Mr. Rhyne's alleged benzene exposure. Dr. Harrison's initial report referred to and relied on a report by Mr. Petty. That report has been withdrawn. Thus, Dr. Harrison should not be permitted to refer or rely on Mr. Petty's report at trial.

On October 17, 2019, which was the night prior to his deposition and after Plaintiff's expert deadline, which had been extended numerous times, Dr. Harrison amended and supplemented his report to offer additional opinions based on the dose calculation performed by Mr. Herrick. *See generally* Harrison Supplemental Report.[11] For the reasons set forth in Defendants U.S. Steel and Safety-Kleen's Motion to Exclude or Limit the Testimony, Opinions and Reports of Robert Herrick, Mr. Herrick's dose calculations are unreliable and should be excluded from evidence at

[11] This and the other references to Dr. Harrison's supplemental expert report are attached as Exhibit A-2.

trial.

Therefore, Dr. Harrison's opinions in this case are not tied to admissible evidence of how much (or how little) benzene Mr. Rhyne was exposed to. *Cf. Giddings v. Bristol-Myers Squibb Co.*, 192 F. Supp. 2d 421, 425 (D. Md. 2002) ("Because the experts rely on each other's testimony, Plaintiff has the burden of proving that both expert witnesses' testimony are admissible pursuant to Rule 702 and the Daubert standards."). Without a reliable dose calculation, Dr. Harrison cannot evaluate the dose-response relationship to "rule in" that Mr. Rhyne's AML was caused by benzene. Further, without knowledge of Mr. Rhyne's actual level of exposure to benzene, Dr. Harrison's opinion that Mr. Rhyne's AML was caused by his alleged exposure to benzene is unreliable. As such, Dr. Harrison's opinions are inadmissible.

1. Dr. Harrison cannot reliably demonstrate dose-response.

In issuing his report, Dr. Harrison referred to and relied on a quantitative benzene exposure assessment performed by Plaintiffs' industrial hygiene expert, Mr. Stephen Petty, which Dr. Harrison deemed to be "conservative" in formulating his specific-causation opinions in this matter. *See* Harrison Report (Exhibit A-1), at p. 11, ¶ 5. Mr. Petty issued his report on October 1, 2017.

Notably, Mr. Petty's estimate was based on answers he received during a secret interview of Mr. Rhyne. No transcript or other recordings of this interview has been produced. Further, neither the Defendants nor their experts were allowed to participate in this interview. This certainly raises reliability issues as to Mr. Petty's estimate. Regardless, Mr. Petty's report has been withdrawn by Plaintiff.[12]

On September 17, 2019, Plaintiffs served the report of Mr. Herrick, which drastically differed from that of Mr. Petty. Indeed, Mr. Herrick estimated Mr. Rhyne's benzene exposure to

[12] *See* Plaintiffs Motion to Amend Scheduling Order. Doc. 104. The exclusion of Mr. Petty's report and any reliance thereon by any expert in the case will be the subject of a separate motion in limine.

be between 15 and 20 times less than that calculated by Mr. Petty. Although in his original report he deemed Mr. Petty's calculations to be "conservative," Dr. Harrison testified that he was not at all surprised to see that Mr. Herrick's calculation was between 15 and 20 times lower than Mr. Petty's and that the two calculations were really just "a check on each other." *See* Harrison Depo. Transcript (Exhibit B), at pp. 18:11-19:14.

Dr. Harrison is not an industrial hygienist. He is not qualified to quantify Mr. Rhyne's alleged exposures to benzene. However, to protect his opinions from the lack of a reliable quantitative dose calculation, Dr. Harrison states he can qualitatively characterize Mr. Rhyne's exposure to benzene. *See* Harrison Depo. Transcript (Exhibit B), at pp. 120:5-1. Although it is true that a *reliable* qualitative assessment of dose may be admissible when a quantitative assessment is not available, this is not a case in which a quantitative assessment is impossible or even difficult. Regardless, Dr. Harrison did not make any meaningful efforts to derive a *reliable* qualitative dose calculation for Plaintiff.

Dr. Harrison qualitatively presumed that Mr. Rhyne had been exposed to a "significant amount" of benzene in connection with his work at Duke Energy and, as mentioned above, qualitatively found Mr. Petty's dose calculation to be "conservative." *See* Harrison Report (Exhibit A-1), at pp. 11-12, ¶ 5. In describing his qualitative methodology, Dr. Harrison testified that he read Mr. Rhyne's deposition testimony and decided that, based on experiences in examining other workers who used products similar to that used by Mr. Rhyne and his general knowledge of toxicological literature that workers can experience dermal and inhalation exposure in using similar products, he was able to opine that Mr. Rhyne had been exposed to a "significant amount" of benzene. *See* Harrison Depo. Transcript (Exhibit B), at pp. 152:5-153:10. Dr. Harrison spoke to Mr. Rhyne and, although there is no recording or transcription of that call, Dr. Harrison testified

he did not ask Mr. Rhyne about his use of the products at issue in this case. *See id.* at p. 154:3-20. Therefore, Dr. Harrison's qualitative assessment is limited to his review of the four volumes of Mr. Rhyne's deposition testimony, which he thinks took him a "couple of hours" to review. *See id.* at p. 157:1-3.

Lastly, Mr. Rhyne testified that he used Defendants' products and solvents as an auto mechanic student and as a mechanic and pipefitter at Duke Energy from 1976 until 2015. Although Dr. Harrison testified that he used his knowledge of the toxicology literature to determine Mr. Rhyne was exposed to a "significant amount" of benzene, it does not appear that he made any effort to understand whether or not Mr. Rhyne's actual work placed him at an increased risk for developing AML. Dr. Harrison does not offer any studies relating to mechanics that suggest whether or not mechanics as a group are at an increased risk for developing AML. Instead, Dr. Harrison primarily relied on the fact that he has examined other industry workers (many in job classifications that differ greatly from Mr. Rhyne's work) who have used lubricants and degreasers in their work. *See* Harrison Depo. Transcript (Exhibit B), at p. 152:5-25. In other words, Dr. Harrison offers nothing more than unsupported statements that Mr. Rhyne's exposures are high. As noted by the Fourth Circuit, "'nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert.'" *Cooper*, 259 F.3d at 203 (*quoting Kumho Tire*, 526 U.S. at 157).

Simply put, Dr. Harrison has no knowledge regarding how much (or how little) benzene to which Mr. Rhyne may have been exposed. At best, he offers a guess that Mr. Rhyne has a "benzene case". Guesses, even if educated, are insufficient to prove the level of exposure in a toxic tort case. *See Daubert,* 509 U.S. at 589 (unsupported speculation and subjective belief insufficient to meet Fed. R. Evid. 702's reliability requirement); *see United States v. Fultz*, 591 F. App'x 226,

228 (4th Cir. 2015) (affirming exclusion of expert opinion based on "pure guesswork"). Dr. Harrison's "qualitative approach" thus appears to do nothing more than connect Mr. Rhyne's estimated benzene exposure to his AML "by the *ipse dixit* of the expert." *Gen. Elec. Co. v. Joiner,* 522 U.S. 136, 146 (1997); *see Pugh v. Louisville Ladder, Inc*., 361 F. App'x 448, 454 n.4 (4th Cir. 2010) (broad discretion in exercising gatekeeping function "includes the discretion to find that there is 'simply too great an analytical gap between the data and the opinion proffered'"). Therefore, Dr. Harrison has not completed and cannot complete the toxicological cause-and-effect methodology to reliably "rule in" benzene as a cause of Mr. Rhyne's AML.

IV. CONCLUSION

For the foregoing reasons, Defendant United States Steel Corporation respectfully requests that the Court enter an Order excluding from evidence the specific causation testimony, opinions and reports of Dr. Robert Harrison.

Respectfully Submitted this 7th day of April, 2020.

By: */s/ Jonathan E. Schulz*

Jonathan E. Schulz (N.C. Bar No. 47285)
jschulz@bradley.com
Christopher C. Lam (N.C. Bar No. 28627)
clam@bradley.com
BRADLEY ARANT BOULT CUMMINGS LLP
214 North Tyron Street, Suite 3700
Charlotte, NC 28202
Telephone: (704) 338-6059
Facsimile: (704) 338-6099

Matthew Cairone
(Admitted *pro hac vice)*
THE CAIRONE LAW FIRM, PLLC
PMB 58
1900 Main Street, Suite 107
Cannonsburg, PA 15317-5861
mcc@caironelawfirm.com

Timothy Gray
(Admitted *pro hac vice*)
FORMAN WATKINS KRUTZ, LLP
201 St. Charles Avenue, Suite 2100
New Orleans, LA 70139
Tim.Gray@formanwatkins.com

Attorneys for Defendant United States Steel Corporation

CERTIFICATE OF SERVICE

I hereby certify that on this day, April 7, 2020, I filed the foregoing **DEFENDANT UNITED STATES STEEL CORPORATION'S MEMORANDUM IN SUPPORT OF ITSMOTION TO LIMIT THE TESTIMONY OF PLAINTIFFS' EXPERT ROBERT HARRISON, M.D.** with the Court using the CM/ECF system, which will serve all counsel of record.

/s/ Jonathan E. Schulz
Jonathan E. Schulz

Attorney for United States Steel Corporation